

WHAT IS CLAIMED IS:

1. Crosslinked fine particles having a Tg of 100°C or higher and an amount of remaining double bonds of 0.01 mmol/g or more, which are obtainable by polymerizing a compound (a₁) having one or two radical-polymerizable ethylenic unsaturated groups in the molecule and a compound (a₂) having three or more (meth)acryloyl groups in the molecule.
2. Crosslinked fine particles according to claim 1, which have an average primary-particle diameter in a range of 10 to 1,000 nm.
3. Crosslinked fine particles according to claim 1 or 2, which have a percentage of cubical expansion in methyl ethyl ketone at 25°C of 300% or less as calculated by the following equation:

$$V = (R_2)^3 / (R_1)^3 \times 100$$

wherein V is percentage of cubical expansion (%), R₁ is the primary-particle diameter of the crosslinked fine particles (A) measured in water at 25°C by a dynamic light scattering method, and R₂ is the primary-particle diameter of the crosslinked fine particles (A) measured in methyl ethyl ketone at 25°C by the dynamic light scattering method.

4. Crosslinked fine particles according to any one of claims 1 to 3, wherein the proportions of the component (a₁) and the component (a₂) are as follows: in

the total proportion (100 wt%) of the component (a_1) and the component (a_2), the proportion of the component (a_1) ranges from 55 to 95 wt%, and the proportion of the component (a_2) ranges from 5 to 45 wt%.

5. A curable resin composition substantially free of water and solvents, comprising crosslinked fine particles (A) having a T_g of 100°C or higher and an amount of remaining double bonds of 0.01 mmol/g or more which are obtainable by polymerizing a compound (a_1) having one or two radical-polymerizable ethylenic unsaturated groups in the molecule and a compound (a_2) having three or more (meth)acryloyl groups in the molecule, and a compound (B) having at least one (meth)acryloyl group in the molecule.

6. A curable resin composition according to claim 5, which has a viscosity at 25°C of 10 Pa·s or less.

7. A curable resin composition according to claim 5 or 6, which contains a radical polymerization initiator (C).

8. A curable resin composition according to claim 7, wherein as the radical polymerization initiator (C), there is used a photopolymerization initiator (c_1) capable of generating a radical on irradiation with active energy rays, and/or a thermal polymerization initiator (c_2) having a 10-hours half-life temperature of 100°C or lower.

9. A curable resin composition according to any

one of claimes 5 to 8, wherein the crosslinked fine particles (A) are those having an average primary-particle diameter in a range of 10 to 1,000 nm.

10. A curable resin composition according to any one of claims 5 to 9, wherein the crosslinked fine particles (A) are those having a percentage of cubical expansion in methyl ethyl ketone at 25°C of 300% or less as calculated by the following equation:

$$V = (R_2)^3 / (R_1)^3 \times 100$$

wherein V is percentage of cubical expansion (%), R_1 is the primary-particle diameter of the crosslinked fine particles (A) measured in water at 25°C by a dynamic light scattering method, and R_2 is the primary-particle diameter of the crosslinked fine particles (A) measured in methyl ethyl ketone at 25°C by the dynamic light scattering method.

11. A curable resin composition according to any one of claims 5 to 10, wherein the crosslinked fine particles (A) are those in which the proportions of the component (a_1) and the component (a_2) are as follows: in the total proportion (100 wt%) of the component (a_1) and the component (a_2), the proportion of the component (a_1) ranges from 55 to 95 wt%, and the proportion of the component (a_2) ranges from 5 to 45 wt%.

12. A curable resin composition according to any one of claims 5 to 11, wherein the proportions of the

crosslinked fine particles (A) and the compound (B) are as follows: in the total proportion (100 wt%) of the component (A) and the component (B), the proportion of the component (A) ranges from 5 to 50 wt%, and the proportion of the component (B) ranges from 50 to 95 wt%.

13. A curable resin composition according to claim 5, which is a curable resin composition for film coating.

14. A curable resin composition according to claim 5, which is a curable resin composition for coating material for wood coatings.

15. A curable resin composition according to claim 5, which is a curable resin composition for printing ink.